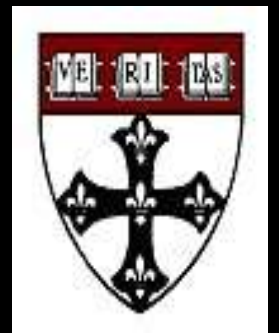


Bringing Eating Disorders Prevention Into Focus as a Public Health Priority

A Research Plan of Action

S. Bryn Austin, ScD

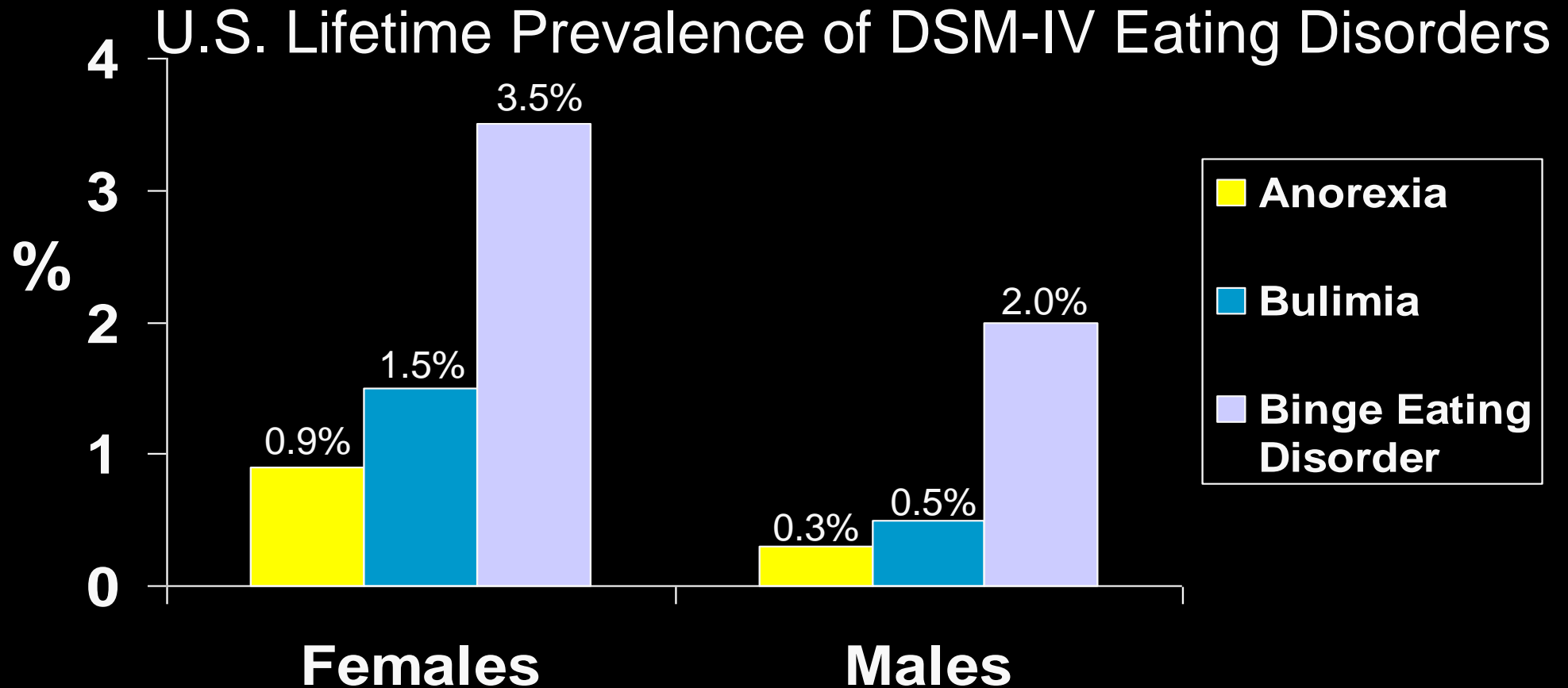
Division of Adolescent Medicine
Boston Children's Hospital
Harvard School of Public Health



Overview of Presentation

- **Part 1:** Are eating disorders & poor body image important issues for society, public health?
 - Brief review of wide-ranging health consequences
- **Part 2:** What does prevention science offer?
 - Two examples applied to eating disorders
- **Part 3:** How can public health agenda be changed?
 - A strategic approach to workforce training

Importance of Eating Disorders for Society, Public Health

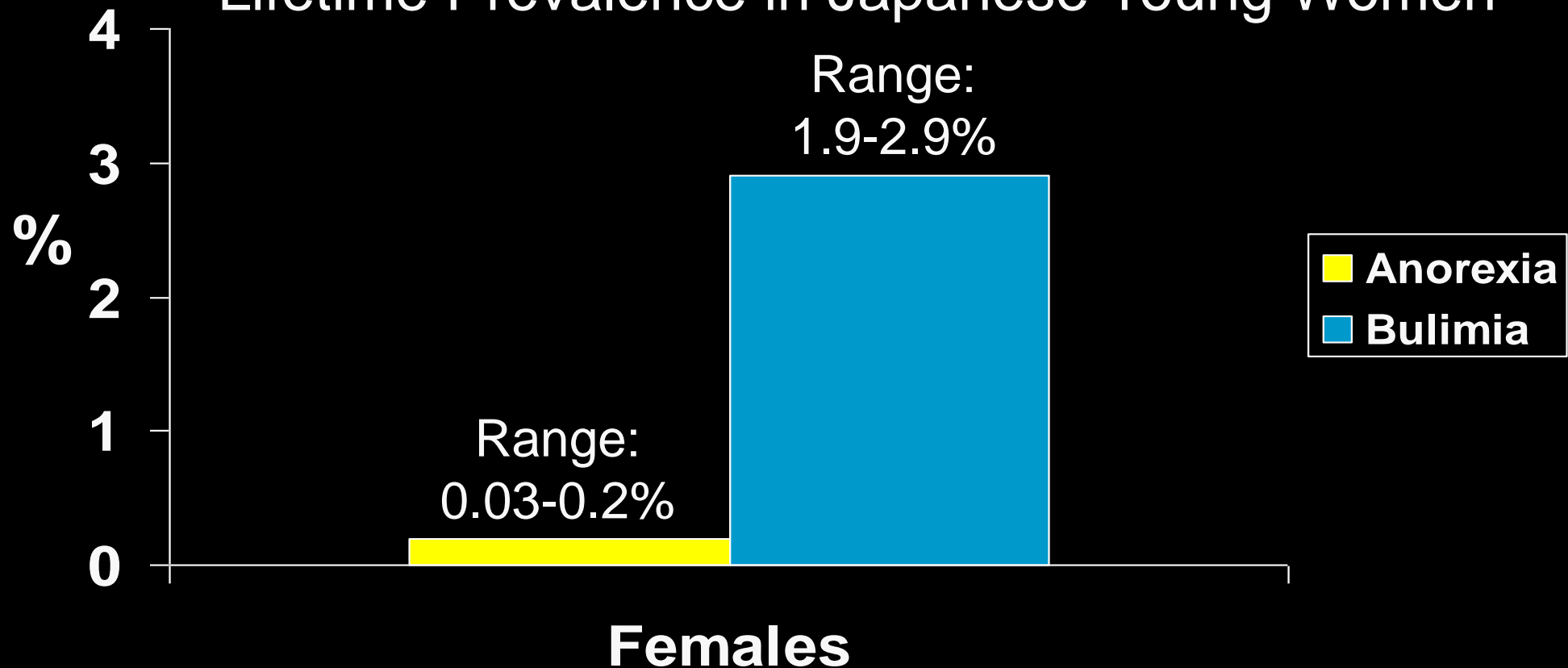


U.S. National Comorbidity Replication Study

Hudson *et al* 2007

Importance of Eating Disorders for Society, Public Health

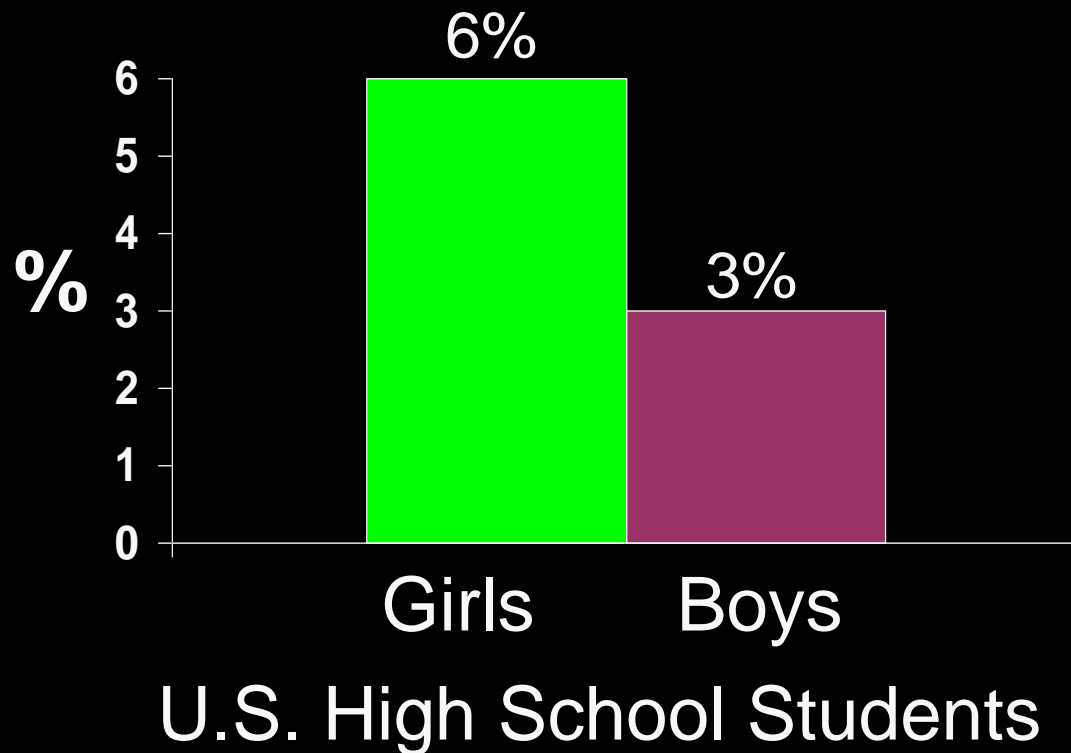
Lifetime Prevalence in Japanese Young Women



Chisuwa & O'Dea 2010 (Review article)

Importance of Eating Disorders for Society, Public Health

% Vomit/Take Laxatives for Weight in Past Month

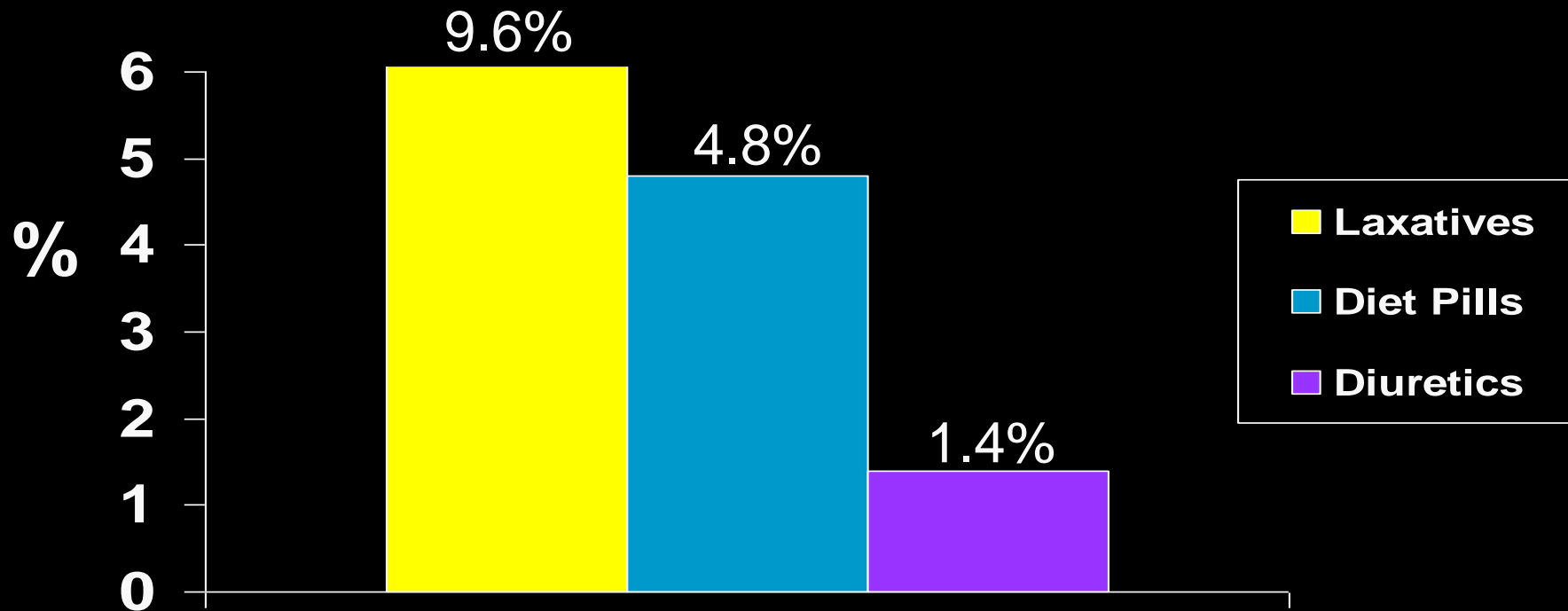


Nearly *2 million girls*, *1 million boys* vomit to control their weight each year in U.S.

CDC YRBSS 2011;
Austin *et al* 2008;
Croll *et al* 2002

Importance of Eating Disorders for Society, Public Health

% Reporting Lifetime Use of Laxatives, Diet Pills, Diuretics in Japanese High School Girls

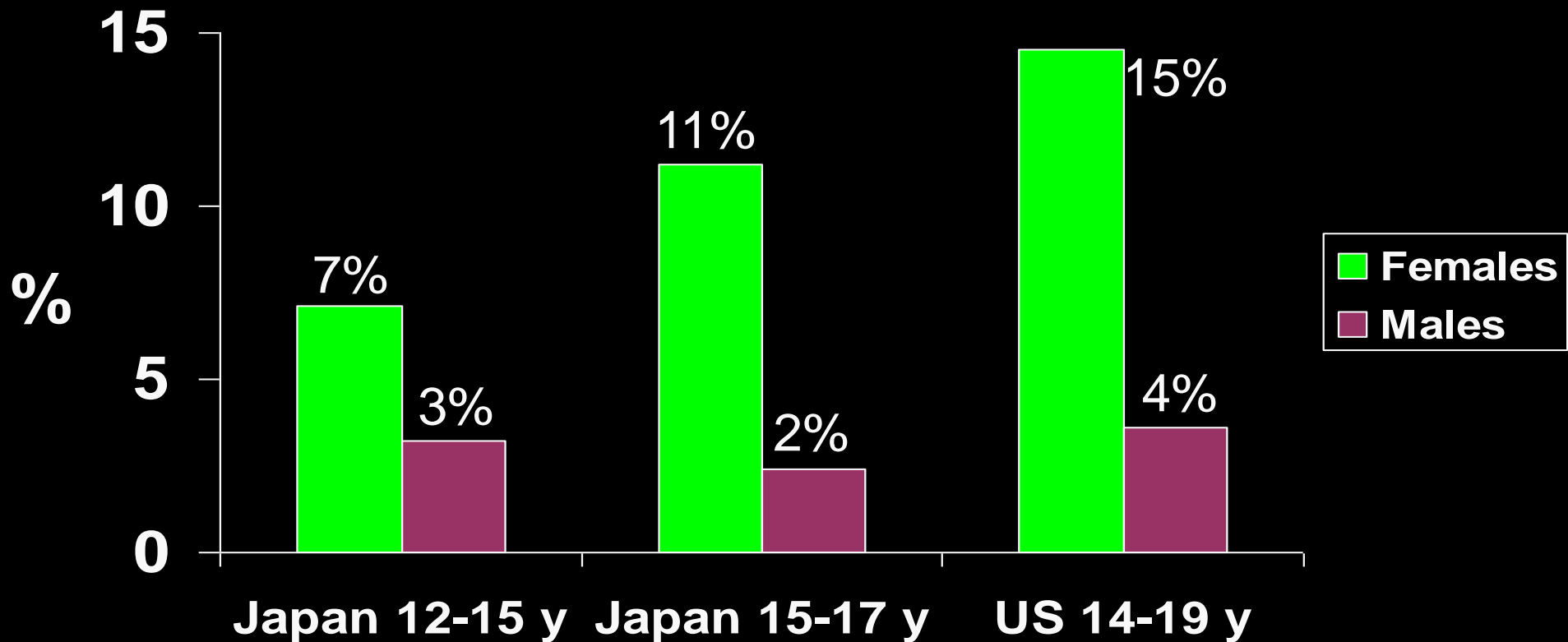


Japanese High School Girls

Nakamura *et al* 1999

Importance of Eating Disorders for Society, Public Health

% Adolescents Scoring >20 on EAT-26

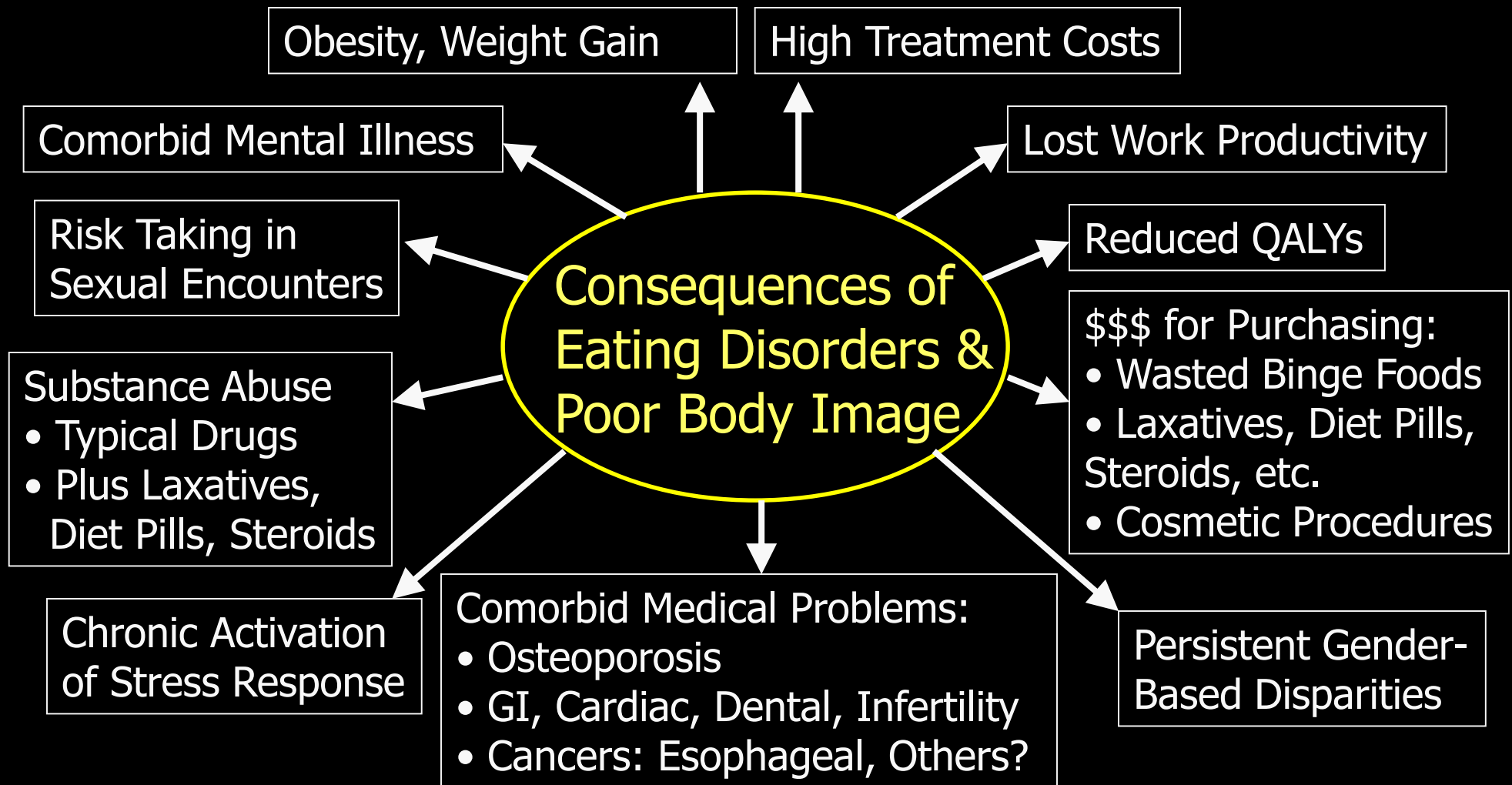


Yamamoto *et al* 2007; Nishizawa *et al* 2003; Austin *et al* 2008

Importance of Eating Disorders for Society, Public Health

- Documented in developed and emerging economies around world (Treasure *et al* 2010; de Souza Ferreira *et al* 2008)
- Affect all genders, all racial/ethnic groups (Chao *et al* 2008; Marques *et al* 2010; Austin *et al* 2008)
- Positive association with SES often assumed
 - But not supported in population-based studies (Striegel-Moore *et al* 2000; Rogers *et al* 1997)

Health Consequences Wide Ranging



Compelling Need for Large-Scale Prevention

- Need to reach many millions at risk
- Need to reach youth early with primary prevention
 - Before onset of poor body image, eating disorders, and related disordered behaviors
- *In other words...*
 - *Compelling need for public health approach*

This Idea Proposed by Others...

- In 2007, a *Lancet* editorial asked:
 - *"Is it time for a public health approach to eating disorders?"*
 - Leading scholars in field responded with a resounding *Yes!* in letter to editor
- (Taylor, Franko, Neumark-Sztainer, Paxton, Shapiro 2007)

Yes, but...

- ...Still, we are left with the question "*How?*"
 - *How can we bring a public health approach to eating disorders prevention?*

Part 2: Prevention Science

Tools of Prevention Science



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Tools of Prevention Science

- Many tools for prevention in public health
 - Time this afternoon for just two examples...

Prevention Science Tools

Example #1

Prevention Maturation Schema

Prevention Maturation Schema

- Systematic framework to classify phases of prevention research
 - Sallis, Owen, & Fotheringham (2000)
 - Based on core beliefs that:
 - Goal of public health to improve population health, reduce/prevent human suffering
 - Achieving goal requires *sequential research* from descriptive to analytic studies to interventions

Prevention Science Tools Example #1

Prevention Maturation Schema

- Five phases of prevention maturation schema:
 - 1: Establish link between risk behavior & health
 - 2: Develop methods for measuring risk behavior
 - 3: Identify causes of risk behavior
 - 4: Evaluate preventive interventions (1° or 2°)
 - 5: Evaluate dissemination of preventive interventions

Prevention Science Tools Example #1

Prevention Maturation Schema

- Earlier phases provide foundation for later phases
 - Young fields concentrate in earlier phases
 - i.e., Phases 1-3
 - Mature fields concentrate in later phases
 - i.e., Phases 4-5

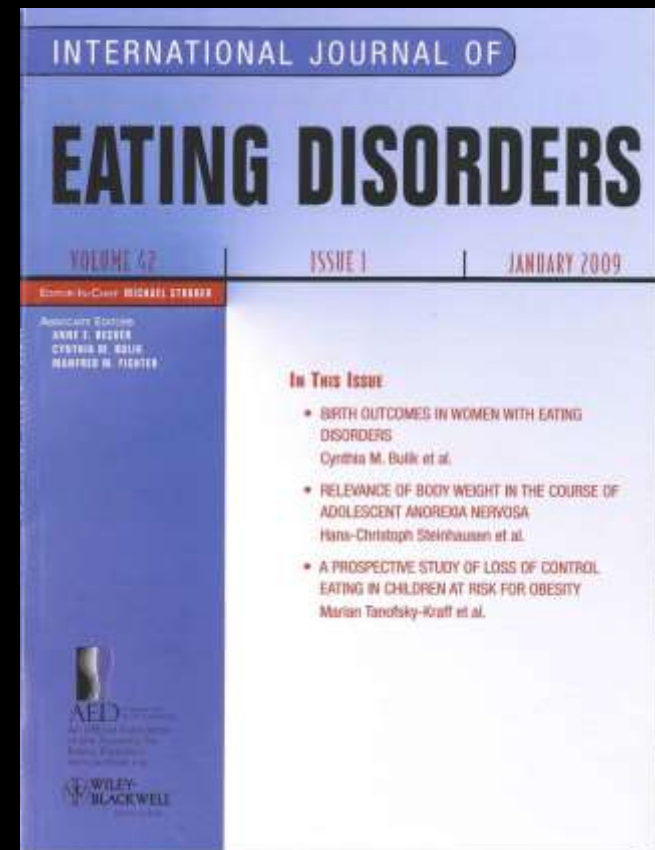
Practical Utility of Schema

- Apply to field's empirical literature to answer two key questions:
 - *Question #1: Is a field ready for preventive intervention research?*
 - *Question #2: Is productivity in prevention research comparable to earlier phases?*
 - Productivity in *Phases 4-5* relative to Phases 1-3

Prevention Science Tools Example #1

Illustration of Application of Schema to Eating Disorders Literature

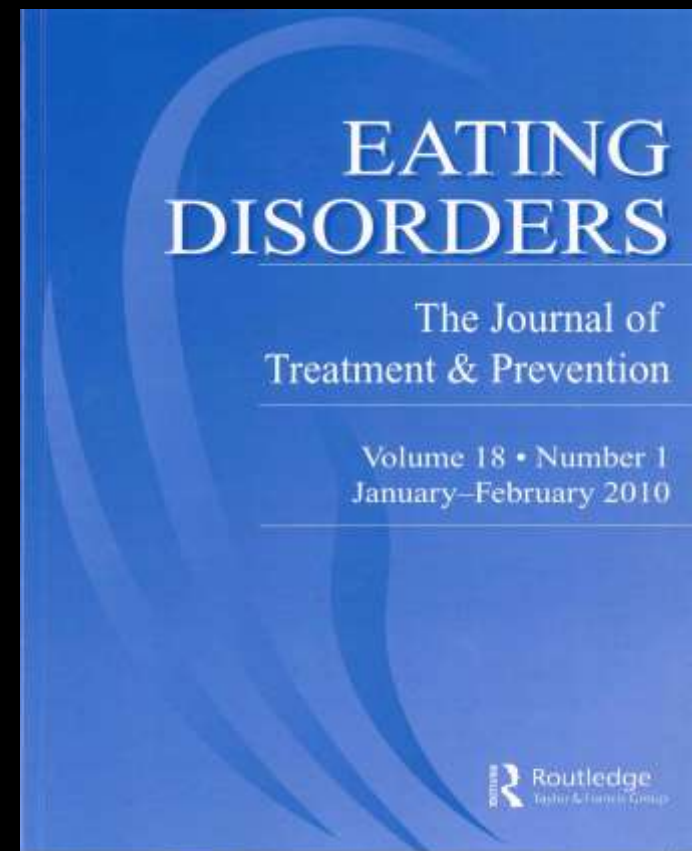
- Applied to:
 - 1) *International Journal of Eating Disorders*
 - Articles: Jan 2005-Dec 2010
 - N=701 articles
 - *Disclaimer: I am editorial board member*



Prevention Science Tools Example #1

Illustration of Application of Schema to Eating Disorders Literature

- Applied to:
 - 2) *Eating Disorders: Journal of Treatment & Prevention*
 - Articles: Jan/Feb 2005-
Oct/Dec 2010
 - N=280 articles
 - *Disclaimer: I am editorial board member*



Prevention Science Tools Example #1

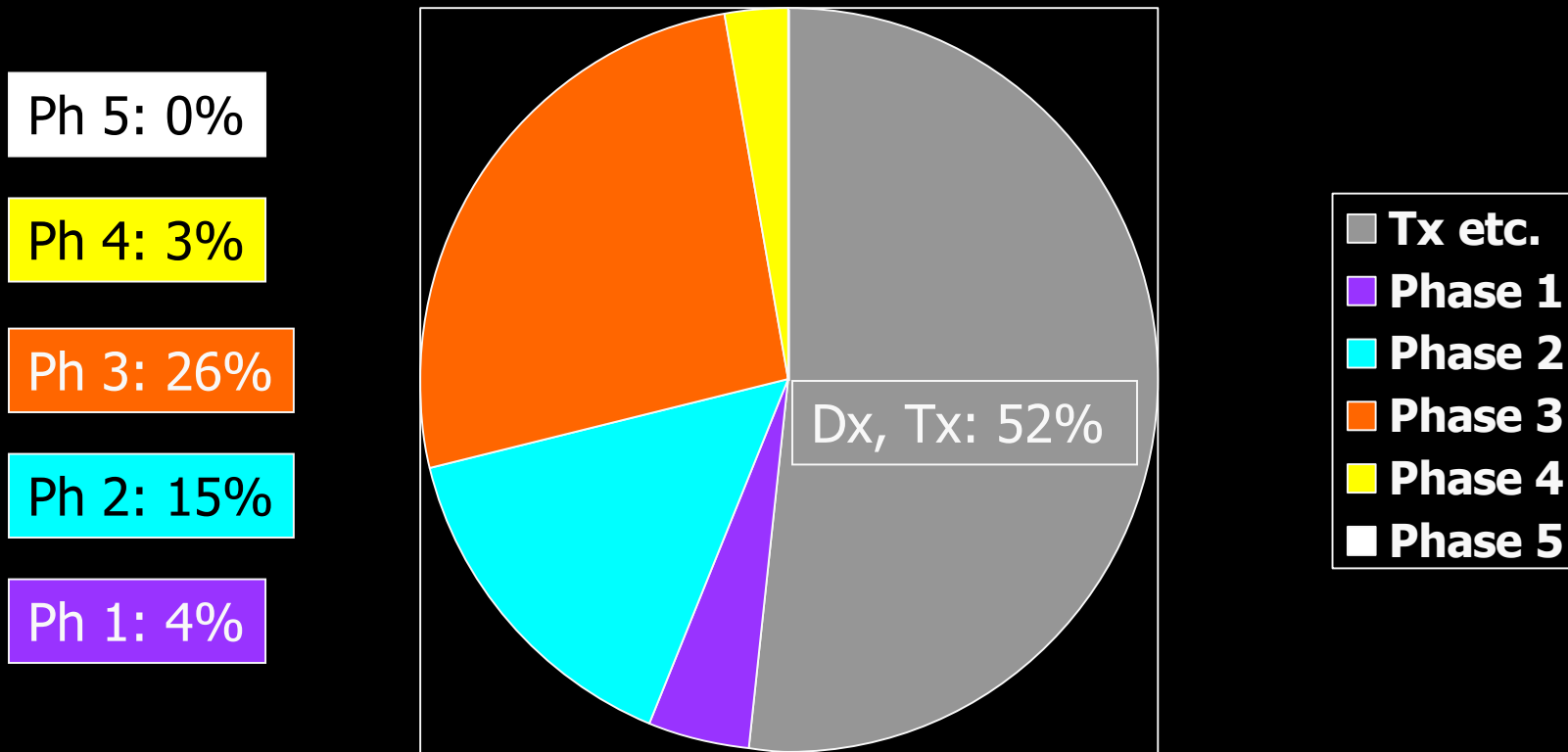
Illustration of Application of Schema to Eating Disorders Literature

- Methods
 - Tailored coding rules of Sallis *et al* (2000)
 - Coded as unrelated to prevention: Diagnostic criteria, course after diagnosis, treatment
 - Two independent coders
 - Tallied number of articles coded in each phase

Prevention Science Tools Example #1

Results of Schema

Applied to *International Journal of Eating Disorders*



N=701 articles

Austin 2012

Prevention Science Tools Example #1

Results of Schema

- *International Journal of Eating Disorders*
 - Substantial development through Phase 3 on causes of risk
 - *Steep drop off after Phase 3*

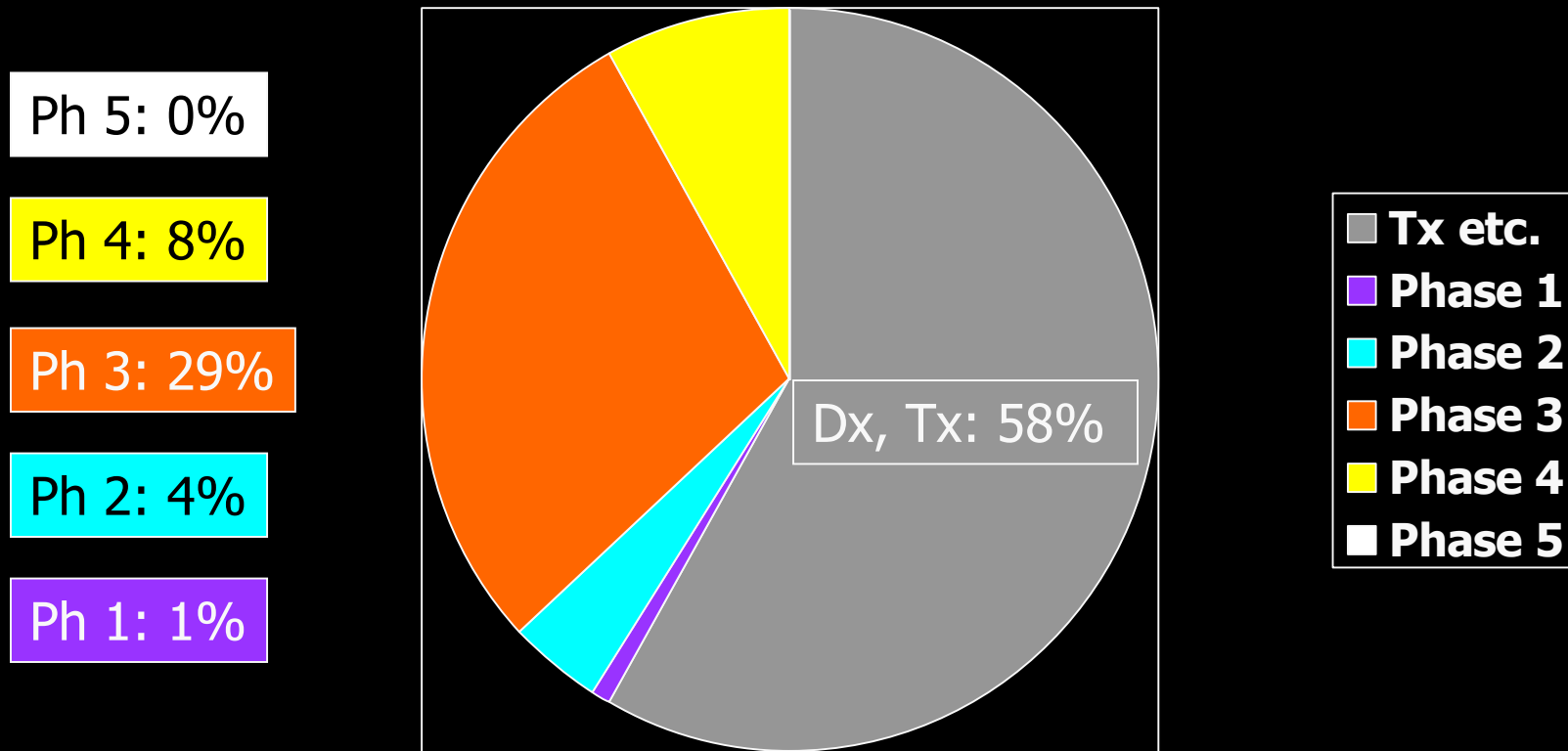
So how about Eating Disorders: The Journal of Treatment & Prevention?

Let's take a look...

Prevention Science Tools Example #1

Results of Schema

Applied to *Eating Disorders: The Journal of Treatment & Prevention*



N=280 articles

Austin 2012

Prevention Science Tools Example #1

Results of Schema

- *Eating Disorders: J Treatment & Prevention*
 - Again, substantial development through Phase 3 on causes of risk
 - *Steep drop off after Phase 3*
- Limitation
 - Other prevention studies published prior, elsewhere
 - Though not likely to substantially change findings

Prevention Science Tools Example #1

What Do Schema Results Mean?

Question #1: Is field of eating disorders ready for preventive intervention research?

– ***YES!***

- Substantial literature on causes (Phase 3) means field well-prepared to move to next phase

Prevention Science Tools Example #1

What Do Schema Results Mean?

Question #2: Is productivity in prevention research comparable to earlier phases?

– ***NO!***

– In fact, sharp drop off after Phase 3 suggests too few prevention scientists entering field of eating disorders

Prevention Science Tools Example #1

What Do Schema Results Mean?

- *Why??*
 - *Is there a gap in the prevention science training pipeline?*



Is there a gap in the prevention science training pipeline?



*Hold
that
thought...*

Prevention Science Tools Example #2: Application to Eating Disorders

Environmental
Models and
Leveraging
the Macro
for Prevention



Environmental Models of Causation and Prevention

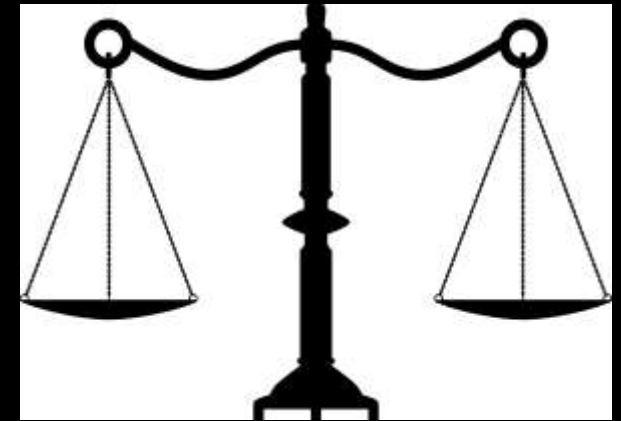
- Decades of work on role of environment in causation and prevention
 - Multiple frameworks, tools offered to define environment, assess health links
 - From psychology, sociology, public health, etc.
 - Moos 1979; Bronfenbrenner 1986; McLeroy *et al* 1988; Winnette *et al* 1989; Cheadle *et al* 1992; Swinburn *et al* 1999, 2011; and many more

Environmental Models of Causation and Prevention

- Public health targets many aspects of environment
 - But offers special expertise in *macro* environmental sectors, strategies to leverage macro for prevention
 - Example strategy:
 - Target law and policy

Prevention Science Tools Example #2

Tool of Macro Strategies: Target Law and Policy

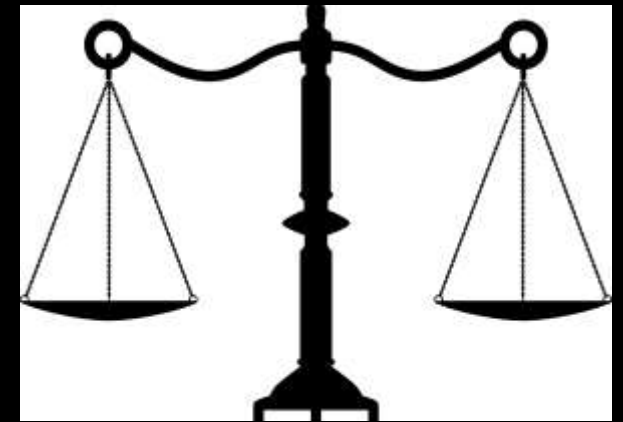


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- Powerful tool to promote health
 - Obesity prevention increasing with regulatory strategy innovation, some successes
 - e.g., soda & fast food restrictions, menu labeling, urban bicycle trails, restrictions on ads to children
 - Mello *et al* 2006; Pomeranz *et al* 2009; Pomeranz 2010

Prevention Science Tools Example #2

Tool of Macro Strategies: Target Law and Policy



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How might macro strategies targeting law and policy be applied to eating disorders prevention?

Prevention Science Tools Example #2

Illustration of Law/Policy Strategies for Eating Disorders Prevention

- First ask:
 - What are eating disorders/body image equivalents of tobacco, alcohol, fast food, or soda industries?

Prevention Science Tools Example #2

Illustration of Law/Policy Strategies for Eating Disorders Prevention

- Equivalents of tobacco, alcohol, fast food, or soda industries?
 - Perhaps diet-product industry? Or laxative, diuretics industries? Cosmetic surgery industry? Fashion industry? Others?

Prevention Science Tools Example #2

Illustration of Law/Policy Strategies for Eating Disorders Prevention

- *Possible target?* Product sales
 - Diet pills, laxatives, diuretics are readily available in stores for youth to purchase, abuse
 - Ipecac, ephedra still available online
 - Regulatory opportunity for governments and drug administrative agencies

Pomeranz, Taylor, Austin 2013

Prevention Science Tools Example #2

Illustration of Law/Policy Strategies for Eating Disorders Prevention

- *Another possible target?* Advertising
 - Deceptive advertising illegal in most places, yet many diet products make grandiose claims
 - Is there regulatory opportunity here for governments and advertising regulators?
 - Restrict ads?
 - Or “black box” warnings (e.g., “This product not effective for weight loss”)?

Prevention Science Tools Example #2

Are We Ready for Law/Policy Action?

- Three conditions needed to trigger law/policy action for prevention...

(Mello *et al* 2006)

**Practical
Considerations**

Political Will



**Evidentiary
Base**

Mello *et al* 2006

Prevention Science Tools Example #2

Condition #1 to Trigger Action

1) Political will

- Requires advocacy to put ED prevention on political agenda for voters, policymakers
 - Methods: Lobbying government, community organizing, media advocacy to shift social norms
 - *Research Challenge*: Evaluate counter ads, social norms campaigns, media coverage, public opinion polls; Need political scientists on teams

Condition #2 to Trigger Action

2) Practical considerations

- How to operationalize ideas into law/policy?
 - Methods: Cross-disciplinary legal research by public health law scholars
 - e.g., RWJ-funded studies: Pomeranz, Taylor, & Austin 2013; Cohen (Under review)
 - *Research Challenge*: Need legal scholars on teams

Prevention Science Tools Example #2

Condition #3 to Trigger Action

3) Basis in evidence


- a) Do economic costs favor prevention?
- b) Does science link exposure to long-term health problems?

Prevention Science Tools Example #2

Condition #3 to Trigger Action

3) Basis in evidence

a) Do economic costs favor prevention?

- Methods: Economic analyses
 - Some economic studies on costs of *treatment* (Koran *et al* 1995; Striegel-Moore *et al* 2000; Reas *et al* 2000; Crow *et al* 2009)
 - *One* economic study (Planet Health) showing *prevention* saves  (Wang, Nichols, Austin 2011)
- *Research Challenge*: Need economists on teams

Prevention Science Tools Example #2

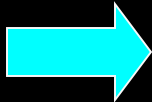
Condition #3 to Trigger Action

3) Basis in evidence

b) Does science link exposure to long-term health problems?

- Methods: Psychology especially & other disciplines have & can contribute
- *Research Challenge*: Examine long-term health effects of exposures amenable to regulation
 - i.e., specific products, advertising to youth, etc.

Prevention Science Tools Summary

- Wide range of tools in prevention science
 - Many applicable to eating disorders prevention
 - Offered just two examples this afternoon
 - Prevention maturation schema
 - Macro environment  Law/policy strategies
- **Caveat:**
 - Admittedly, easy to say need to use array of prevention science tools...
...but not so easy to do

How?

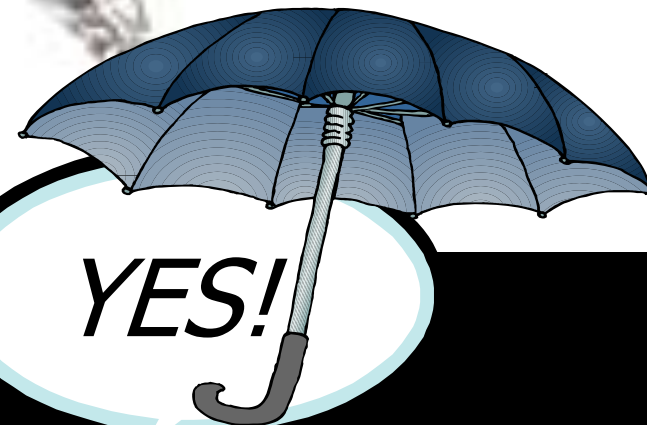
*How do we integrate wide range
of tools & transdisciplinarity
into eating disorders prevention?*



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Which brings us back to that
thought we were holding...

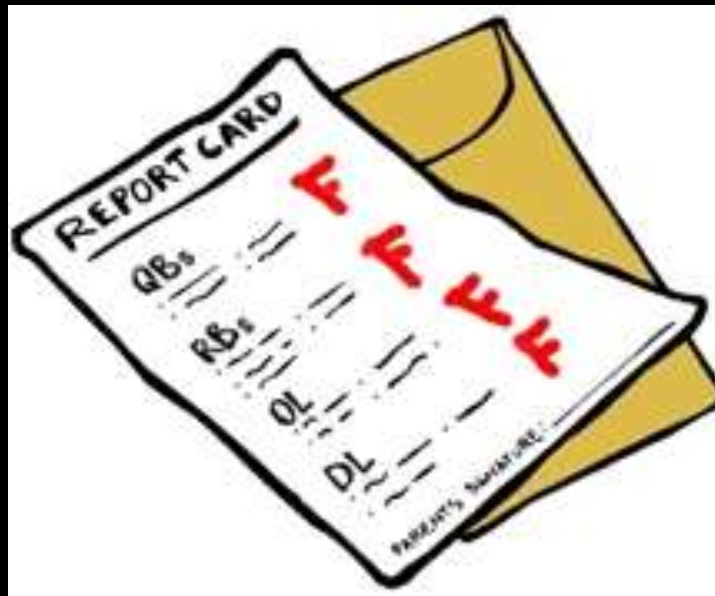
*Is there a gap in
the training
pipeline???*



YES!

Training Pipeline Gap: Where, Why?

- Public health schools are leaders in training researchers in prevention science, but...
 - ...laggards in training researchers in eating disorders



Noteworthy:
Psychology by far
most productive field
in eating disorders
research

Training Pipeline Gap: Where, Why?

- Public health schools are leaders in training researchers in prevention science, but...
 - ...laggards in training researchers in eating disorders
 - *Advancing prevention on large scale will require public health workforce with appropriate expertise*

How can we do that?

Part 3: Strategic Training

STRIPED

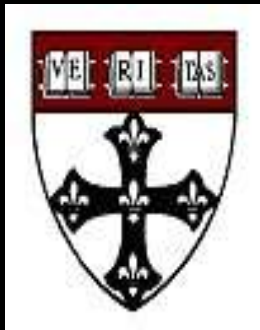
A Public Health
Incubator

Strategic Training Initiative for the Prevention of Eating Disorders

www.hsph.harvard.edu/striped

A collaboration of
Harvard School of Public Health
and Boston Children's Hospital

Launched June 2009



Our Mission

- To train the next generation of health professionals to harness the power of public health to prevent eating disorders and related problems with food, weight, and appearance.
- We strive to create a society where girls and boys alike can grow up at home in their own bodies.

STRIPED

A Public Health Incubator

Our Team

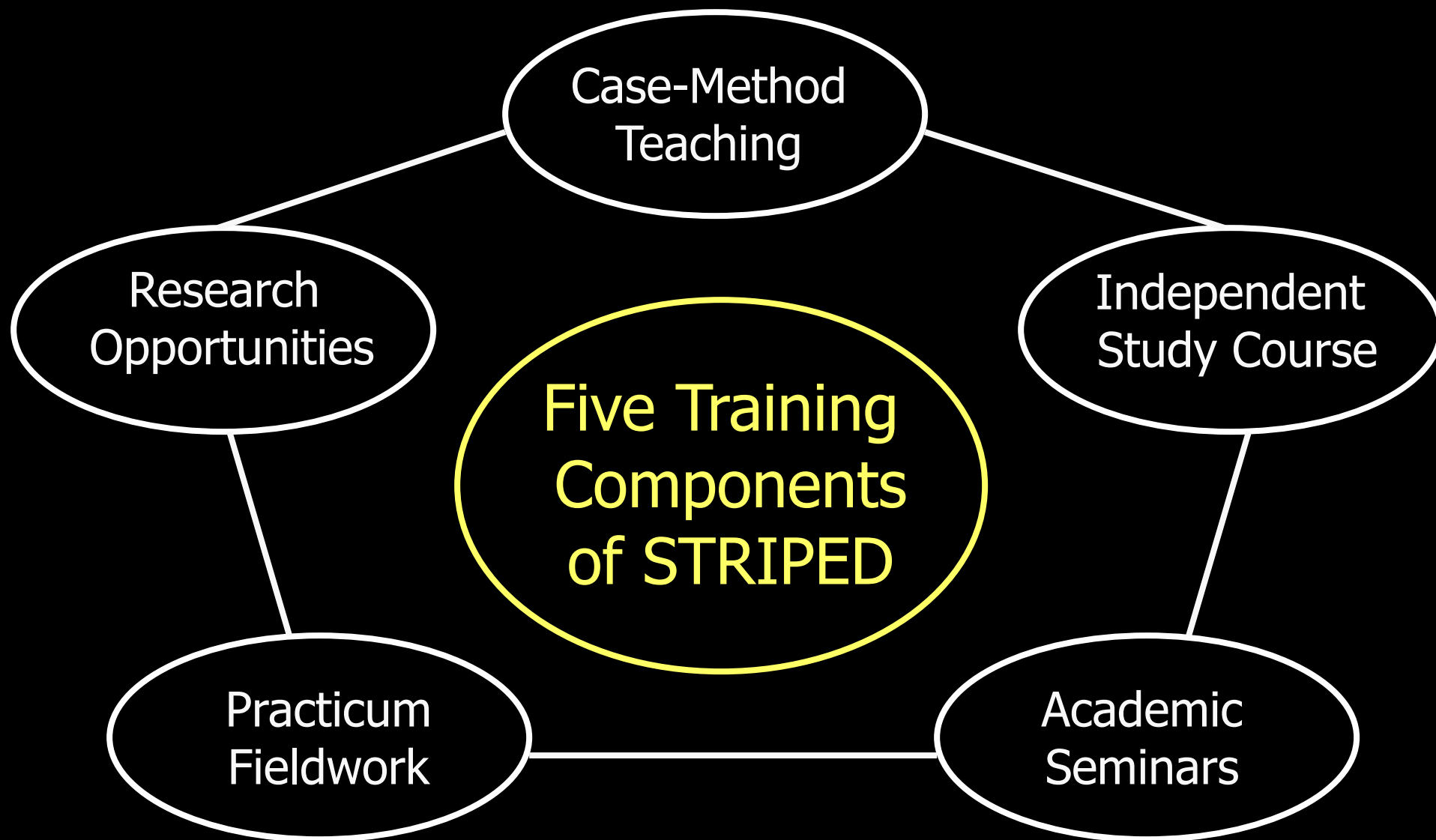
- Faculty
 - Bryn Austin, ScD (Director)
 - Kendrin Sonnevile, ScD, RD, LDN (Co-director)
 - Marie McCormick, MD, ScD
 - Jean Emans, MD
 - Jerel Calzo, PhD
- Trainees: *More than 20 so far & adding more*
- International Expert Advisory Panel
- Community organization partners

Preparing Next Generation for Eating Disorders Prevention

- Training goals

- 1) Build *transdisciplinary* competency into workforce to meet challenge of eating disorders prevention
- 2) *Integrate* eating disorder prevention into formal public health & adolescent health workforce training





Preparing Next Generation for Eating Disorders Prevention

- Build on what has been achieved in field to date, move beyond to:
 - Apply wide range of prevention science tools, transdisciplinary approaches
 - Prepare public health school graduates
 - Work from *inside and outside* city, state, federal, and other settings to get eating disorders prevention on public health agenda



home > striped

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About Us

Our Training Strategy

STRIPED Team

For Students

Our Funders

News and Events

Publications

Contact Us

STRIPED

STRATEGIC TRAINING INITIATIVE FOR THE PREVENTION OF EATING DISORDERS

A PUBLIC HEALTH
INCUBATOR

Why STRIPED? Why Now?

Eating disorders and disordered weight control behaviors present a significant threat to the health of adolescents and adults, yet they remain largely overlooked by public health and preventive medicine professionals. To address this critical need, we launched STRIPED in July 2009, based at the Harvard School of Public Health and Children's Hospital Boston, with the goal of building a transdisciplinary training initiative that will generate professionals with the depth and range of expertise and skills needed to take on the challenge of eating disorders prevention.

A Public Health Incubator

Our initiative is a public health incubator, designed to cultivate the creation of novel insights and strategies for prevention by introducing trainees to a rich array of disciplinary perspectives, methodologies, and theories and providing them with opportunities to join crosscutting collaborative teams.

Spotlight on Our Team



Monica L. Wang, MS, a doctoral candidate in the Department of Society, Human Development and Health, was the first trainee

with our Initiative, joining our team in 2009. With the support of the Ellen Feldberg Gordon Fund for Eating Disorders Research for her doctoral dissertation with the Healthy Choices Study, Monica is examining behavioral, familial, and environmental risk and protective factors for disordered weight control behaviors (DWCB) among youth, exploring racial/ethnic disparities in DWCB among

www.hsph.harvard.edu/striped



THANK YOU